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09/489,669	01/24/2000	Branko Kovacevic	0100.9901410	6121

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EXAMINER

BRITT, CYNTHIA H

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 02/20/2004

17

Please find below and/or attached an Office communication concerning this application or proceeding.

SK

Office Action Summary

Application No.

09/489,669

Applicant(s)

KOVACEVIC ET AL.

Examiner

Cynthia Britt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 and 46-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 46-61 is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-44 and 46-61 are presented for examination.

Allowable Subject Matter

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. (Provided the 35 U.S.C. 112, second paragraph issues are resolved)

Claims 46-61 are allowed. Reasons for allowance are indicated in paper 15.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, in line 4, the added limitation "the enabling" does not provide a clear limitation for the claim and is therefore unclear.

As per claim 12, in line 3, the added limitation "the enabling" does not provide a clear limitation for the claim and is therefore unclear.

As per claim 12, in line 4, the added limitation "the condition" does not provide a clear limitation for the claim and is therefore unclear.

As per claim 20, in line 3, the added limitation "the enabling" does not provide a clear limitation for the claim and is therefore unclear.

As per claim 20, in lines 3-4, the added limitation "the condition" does not provide a clear limitation for the claim and is therefore unclear.

As per claim 25, in line 3, the added limitation "the enabling" does not provide a clear limitation for the claim and is therefore unclear.

As per claim 25, in lines 3-4, the added limitation "the condition" does not provide a clear limitation for the claim and is therefore unclear.

These added limitations seem to be missing a verb such as "the enabling is achieved by..." which would clarify what the enabling and the condition are attempting to achieve in the claim.

Claims 2-11, 13-19, 21-24 and 26-31 are dependent on the above claims and therefore inherit the 35 U.S.C. 112, second paragraph issues of the independent claims.

Response to Arguments

Applicant's arguments filed January 21, 2004 have been fully considered but they are not persuasive. The rejection of claims 1-44 in the previous action is maintained. Applicant's arguments pertaining to claims 1-31 are based on the amended independent claims. These amendments have introduced 35 U.S.C. 112, second paragraph issues that are addressed above.

Further, the phrase "asserting a field of a register" in the independent claims can be interpreted to be setting a flag or pointer.

As per claim 32, the examiner would like to point out that by receiving the header information (a portion of the packet) with the error field of the header indicating an error (setting a register field – see above) if MPEG data were being sent, (which is not claimed here, but disclosed in the specification), it would be obvious to send the error information to a video decoder. However, since no video or MPEG data is claimed here, it is unclear why this information would be sent to a video decoder. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11, 20, 21, and 25-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Nuber et al. U. S. Patent No. 5,742,623.

As per claim 1, Nuber et al. teach a method and apparatus for communicating data via a packetized data stream, and the detection of and recovery from errors in high rate digital data streams including an indication of scrambling within the packet “One field included in each isodata transport packet is a field that contains two transport.sub.-scrambling control bits, indicating whether the data in the transport packet is

encrypted. When an isodata transport packet is received with its transport.sub.-- scrambling.sub.-- control bits set to anything other than not.sub.-- scrambled, this condition will be treated identically to reception of an isodata transport packet which has its transport.sub.-- error.sub.-- indicator set. " (column 1 lines 14-20, column 2 lines 5-22, and column 16 lines 1-8).

As per claims 2 and 3, Nuber et al. teach transport stream packets and elementary stream packets. Nuber explains a transport packet by stating "Multiplexing according to the MPEG -2 standard is accomplished by packaging raw elementary streams such as coded video and audio into packetized elementary stream (PES) packets which are then inserted into transport packets." Therefore the transport packets include the PES (column 1 lines 40-67, and column 7 lines 39-59).

As per claims 4 and 6, Nuber et al. teach ignoring a packet found to have an encryption error (column 6 lines 43-51).

As per claim 5, Nuber et al. teach using fill bits to compensate for missing data and therefore the dropped or lost packet is ignored (column 13 lines 30-36).

As per claim 7, Nuber et al. teach using flags when an error condition is detected (column 13 lines 37-65, column 18 line 64 through column 19 line 2).

As per claims 8-11, Nuber et al. teach identifying whether a packet is scrambled by header information in elementary stream data and transport stream data. Nuber explains a transport packet by stating "Multiplexing according to the MPEG -2 standard is accomplished by packaging raw elementary streams such as coded video and audio into packetized elementary stream (PES) packets which are then inserted into transport

packets.” Therefore the transport packets include the PES (column 1 line 40 through column 2 line 15, column 7 lines 39-52, and column 16 lines 1-8).

As per claims 20 and 21, Nuber et al teach a method and apparatus for communicating data via a packetized data stream, and the detection of and recovery from errors in high rate digital data streams which is capable of detecting continuity errors by using a counter (column 4 line 53 through column 5 line 6).

As per claim 21, Webster’s defines rate as “ a fixed ratio between two things, a quantity, amount, or degree of something measured per unit of something else” therefore ‘determining a continuity error rate based upon a continuity discrepancy count and a packet count’ is according to the above definition. However, Nuber discloses keeping track of continuity errors and maintaining a continuity discrepancy count and a packet count in order to keep track of continuity errors (column 4 line 53 through column 5 line 6, column 6 line 67 through column 7 line 6, column 16 line 8 - 48).

As per claims 25-31, Nuber et al. teach that the syntax and semantics of the MPEG -2 transport stream are defined in the International Organization for Standardization, ISO/IEC 13818-1. Nuber et al also teach using packetized elementary streams of video data which are transmitted according to the standard and error detection is provided for the syntax errors including fixed bit patterns, value ranges, previous packet numbering or sequencing, and non repetition of packets (column 1 lines 55-63, column 9 line 21 through column 12 line 42).

As per claims 26,27 and 29, Nuber et al. teach that the syntax and semantics of the MPEG -2 transport stream are defined in the International Organization for

Standardization, ISO/IEC 13818-1. Nuber et al also teach using packetized elementary streams of video data which are transmitted according to the standard and error detection is provided for the syntax errors including fixed bit patterns, value ranges, previous packet numbering or sequencing, and non repetition of packets (column 1 lines 55-63, column 9 line 21 through column 12 line 42). Nuber et al. also discloses using a pointer to keep track of values such as timestamps packet length (column 18 lines 37-66) and continuity (based on previous packet number or count - column 16 line 8 - 48)

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiroshima et al. U.S. Patent No. 5,801,781.

As per claim 1, Hiroshima et al. teach that each packet of the MPEG2-TS has a prefix length of 188 bytes. The header consists of four bytes and the payload consists of 184 bytes. The header is constructed by sync bytes, an error indicator, a unit start indicator, a transport priority, a packet ID, a scramble control, an adaptation field control, a continuity counter, and an adaptation field. The adaptation field is constructed by an adaptation field length, a discontinuity indicator, a random access indicator, an elementary stream priority indicator, a 5-flag, an optional field, and stuffing bytes. (Column 10 lines 51-67, figure 11)

As per claims 2 and 3, Hiroshima et al. teach a moving picture stream converting apparatus constructed by a demultiplexer, a packetizer, and a multiplexer. The demultiplexer receives an MPEG1 system stream including a stream of encoded video data and a stream of encoded audio data and separates an elementary stream (ES) of each of the video and audio data. A packetized elementary stream (PES) of MPEG2 is

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formed by the packetizer from each of the video and audio elementary streams separated by the demultiplexer. The multiplexer divides the video and audio packetized elementary streams into transport packets each having a fixed length (188 bytes) and, thereafter, multiplexes the transport packets, thereby converting to a transport stream (TS) of MPEG2. (column 2 lines 16-50)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nuber et al. U. S. Patent No. 5,742,623 in view of Bock et al. U.S. Patent No. 5,948,119.

As per claim 12, Nuber et al. teach a method and apparatus for communicating data via a packetized data stream, and the detection of and recovery from errors in high rate digital data streams including an indication of scrambling within the packet. Nuber et al. also disclose using pointer registers to indicate errors (column 1 lines 14-20, column 2 lines 5-22, and column 16 lines 1-8, see table 1 and column 18 lines 64-66). Not explicitly disclosed is that the hardware is capable of recognizing the error condition.

However in an analogous art, Bock et al. discloses a method and system for detecting errors in transmitted packetized data, in which the hardware can be designed to detect the errors in the packets (column 9 lines 16-45, Figure 5, column 19 line 18 through column 20 line 14, and figure 13). Therefore it would have been obvious to a person having ordinary skill in the art at the time this invention was made to have used the hardware as described by Bock et al with the method and system taught by Nuber et al. This would have been obvious because one of ordinary skill in the art would have

known that the hardware or software required to detect these error conditions are interchangeable as suggested by Bock et al. (column 9 lines 16-23).

As per claims 13 and 14, Nuber et al. teach transport stream packets and elementary stream packets (column 1 lines 40-67, and column 7 lines 39-59).

As per claim 15, Nuber et al. teach using flags when an error condition is detected. The isodata header will be parsed, to find a data.sub.-- rate.sub.-- flag which is set and to find and record the data clock increment value, if present. If the data.sub.-- rate.sub.-- flag is set, the increment value will be stored into a register and the system microprocessor will be interrupted to indicate that the increment value has been received on the isodata PID (column 13 lines 37-65, column 18 line 64 through column 19 line 2). Nuber et al. also disclose using pointer registers to indicate errors (see table 1 and column 18 lines 64-66).

As per claim 16 and 17, Bock et al. teach sending an error code to a video decoder, which is superimposed onto the video signal (column 13 line 51 through column 15 line 32, Figure 9).

As per claims 18 and 19, Nuber et al. teach recording errors and that the error correction units have user settable registers (column 14 lines 23-32 and column 26 line 48 through column 27 line 32).

Claims 22-24, and 32-45, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nuber et al. U. S. Patent No. 5,742,623 in view of Galbi U.S. Patent No. 5,768,292.

As per claims 22-24, Nuber et al teach a method and apparatus for communicating data via a packetized data stream, and the detection of and recovery from errors in high rate digital data streams which is capable of detecting continuity errors by using a counter (column 4 line 53 through column 5 line 6). Not explicitly disclosed is the inputs received from external devices.

However, in an analogous art Galbi teaches in response to an error signal from an external source of an MPEG audio data stream, an MPEG audio decoder replaces errors in the audio data stream with an error code which is a bit combination rarely found in MPEG audio data frames, and then temporarily enables error handling. The audio data stream containing error codes can be saved or buffered in the decoder (column 2 lines 41-54). During audio decoding with error handling enabled, the decoder checks the audio data for the bit combination equaling the error code and replaces the bit combination with reconstructed data. Therefore it would have been obvious to a person having ordinary skill in the art to have used the external signals taught by Galbi with the system of error detection in MPEG data streams taught by Nuber et al. This would have been obvious because a person having ordinary skill in the art would have known that external devices are typically used with MPEG audio/video decoding systems as disclosed by Galbi (column 1 line 60 through column 2 line3).

As per claims 32-45, Nuber et al. teach a method and apparatus for communicating data via a packetized data stream which can be packetized elementary streams or transport packets of MPEG data, and the detection of and recovery from errors in high rate digital data streams which is capable of detecting continuity errors by using a counter and other syntax errors in the packet. Nuber et al. also disclose a decoder for receiving error indications in video data (column 3 lines 5-14, claims 18-33, column 4 line 53 through column 5 line 6, column 1 lines 55-63, column 9 line 21 through column 12 line 42).

Galbi teaches a method for decoding a digital data stream containing an error, including the steps of: transmitting a digital data stream from a data source to a decoder; asserting an error signal from the data source to the decoder when the data source detects an error; replacing a portion of data in a digital data stream with an error code when the error signal and the portion of data are received by the decoder; asserting a flag signal in the decoder to enable replacing of bit combinations which are in the data stream and equal to the error code; changing the data stream by replacing a bit combination which is in the data stream and equal to the error code; and decoding the changed data stream (column 2 lines 5-54, figures 1 and figure 7-all, column 35 lines 2-18).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

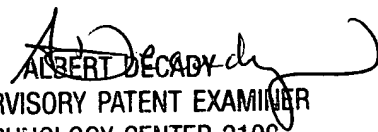
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Britt whose telephone number is 703-308-2391. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 703-305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cb

Cynthia Britt
Examiner
Art Unit 2133


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